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ABSTRACT

With school enrollments fluctuating, educational administrators need to do a more thorough job of planning for future educational facilities. Educational specifications can provide a helpful planning foundation for the educator and the architect. The specifications should provide specific objectives that consider the teaching/learning process to take place in the facility, the size of the student body to be housed, social and academic backgrounds of students, necessary media facilities, and potential community use of the facility. The development of educational specifications should be done by an educator, and it should involve and reflect the needs of the board of education, administrators, teachers, students, and the community. Once the educational specifications have been developed for a facility, there should be continuous evaluation of the architectural drawings to see that the specifications are being met. (Author/JG)

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THE PROCESS OF DEVELOPING EDUCATIONAL SPECIFICATIONS

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Introduction

Present-day school administrators face a wide array of problems, but probably the most difficult problem of all is trying to use limited financial resources in the most efficient way. As each school year passes, the competition with other governmental agencies for scarce funds becomes greater; still, the administrator must plan and implement an educational program that will meet the needs of the students charged to his or her responsibility. Moreover, this program must be housed in adequate facilities. For this reason, the administrator must make wise decisions regarding the expenditure of public funds for these facilities. As with every other phase of operation, careful planning of school facilities is of the utmost importance.

Many state departments of public education state that a serious waste of public school funds can occur through the construction of a school plant which contains facilities which are not needed, or through the omission of those which are necessary. A great deal of waste is promoted when school systems hasten into architectural planning without first carefully considering the purposes of the school.

In spite of the fact that a great many school divisions are now experiencing a declining enrollment and a resultant decrease in need for new facilities, there are school divisions that still face a catchup period of providing new facilities for an increasing enrollment. Whether or not there is a need for new facilities as a result of an increase in enrollment, all school divisions do face the need to replace old and obsolete buildings and to renovate existing facilities to accommodate changes in program, technology, or methodology.

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This period of slow growth or declining enrollment does, however, remove the immediacy from the planning process in many school divisions, and it should allow educators to do a more thorough job of planning for new facilities or to make changes in existing structures. But regardless of the particular situation regarding school facilities, today's educators must obtain more effective results from the planning process. Other social phenomena, besides increased enrollment, demand more effort on the part of the educator in planning to house students.

The present bleak economic situation presents a most difficult situation for the professional educator in obtaining both operating and capital funds. Whether it be a recession or a depression, the present situation manifests itself in a higher percentage of bond referendums being defeated throughout the nation. This is apparently the most immediate and effective means of showing citizen disenchantment or resistance.

In addition to the above, the inflationary economic environment sends construction costs spiraling ever upwards. School divisions across the country have reported significant increases in construction costs—from 25% to 45%—in a period of just 4 or 5 years. Every increase in construction costs and bonding interest rates is reflected in an increase in the debt service section of the operating budget. Regardless of these seemingly overwhelming social and economic factors, the educator is faced with the responsibility of housing students in adequate facilities. This charge, then, makes it increasingly important for the educator to obtain the necessary results from limited resources. Given the present-day social and economic constraints, the only way educators can obtain the goal of adequate housing of students is by the proper planning of school facilities.

The process of planning for school facilities, whether it means new construction or renovation of existing structures, is a complicated series of interrelated processes starting with identification of need and proceeding through the final phase of occupying the new facility. One of the processes in the comprehensive planning for school facilities is the development of a set of educational specifications. This process is many times the weakest link in planning facilities for many reasons, which are outlined below. This process, however, is one that can produce greater return in terms of functional facilities for the effort expended than almost any other process or series of acts. The process of developing educational specifications is, indeed, an arduous task, but one that is necessary if educators are to obtain the most efficient use of limited capital resources to house students.

This booklet is designed to help superintendents, directors and supervisors of school facilities, and practicing architects to answer some questions regarding the process of developing educational specifications.

What are the advantages in developing educational specifications?

The final result of developing educational specifications may be a document which will serve as a planning tool for both educator and architect. The document will contain a comprehensive explanation of the educational program which will be carried on in the proposed facility in terms of the teaching/learning process. This information will be an invaluable asset in school planning with regard to space relationship, physical needs, and equipment.

An educational specifications document will also serve as a vehicle of formal communication between the educator and the architect, providing a clear and concise definition of need which focuses upon the purposes of the school before construction begins. The document will describe in simple written words, graphic representation, and pictures the physical needs of the educational program. In this manner, the facility will conform to the teaching/learning process and not the process to the completed facility. Therefore, the educator will be able to account for the needs of all program areas, not leaving any of the requirements to chance. Finally, and most importantly, a properly developed set of educational specifications will be utilized in the analysis of architectural drawings, thereby keeping the projected building within the limits set by the Board of Education and, in this manner, controlling costs.

In the planning of new facilities, many questions arise that need to be answered in written form. The following are typical kinds of questions relating to new facilities.

- How many students will the facility serve?
- What are the age groupings, backgrounds, needs, and capabilities of the students who will occupy the facility?
- What will be taught?
- What methods of teaching will be used?
- Are learning/teaching machines to be used?
- What kind of media center/library should the facility have?
- Will the program include science, math, and foreign languages which may require special laboratories?
- Will the curriculum include vocational education courses?
- How long will the school day be?

— How many students will eat lunch?

— Will the school offer drama, music, and sports?

— How many teachers will there be?

— Will the community utilize the building during nonschool hours?

— Will the facility be used in a year-round school program?

Throughout the initial planning stages preceeding the development of the educational specifications, these questions and others should be answered in writing and given to the architect. Once these questions are answered in written form, they will not have to be asked and answered again and again.

The educational specifications document will become, in effect, school board policy and direct the architect in precisely what the school division needs in terms of school facilities.

Proper design and utilization of educational specifications will, therefore, eliminate guesswork and prevent the possibility of overbuilding or underbuilding.

Who should write the educational specifications?

It must be clearly understood that educational specifications is an educational document and should be written by someone knowledgeable in the field of education. Ideally, a professional educator is the person who should write the specifications. This person could be a school division employee or an educational consultant. In many small school divisions, a staff member such as a vice-principal or even a teacher may be relieved of other responsibility to enable him or her to plan the development of educational specifications. In larger school divisions, someone in the school facilities department is usually charged with the responsibility. Both small and large school divisions many times employ educational consultants to write specifications for them because of certain advantages such as knowledge of educational processes, in-service possibilities, and time.

How is the community involved in developing educational specifications?

Although one person may direct the process of developing educational specifications and actually write the document, the end product must reflect the needs as enunciated by many sources: members of the Board of Education, administrators, heads of departments, teachers, students, and various community groups.

Community input is essential, for it serves as a means of expressing the needs of its members, and in the process of expressing these needs, community participants will better understand the program that will be carried on and the facility that will house the students. This understanding will facilitate the acceptance and utilization of the new facility.

How do educational specifications help the architect?

The architect's primary function is to design the envelope or facility in which the educational program, as planned by educators, will be carried on. A set of educational specifications will, in fact, specify to the architect the exact physical needs of the school division.

In a sense, the educational specifications will serve as a springboard for the architect's imagination and enable him to spend more time on creative application to the solution of the problem. Most architects who have designed educational facilities have a great deal of knowledge about education, but they cannot be expected to have expertise in areas in which they are not trained. The architect cannot be expected to be informed on curricular developments, the learning process, methodology, or other areas which normally are considered the areas of educators.

By having an educator develop the educational specifications, the architect will not have to spend valuable time in programming the facility. He can devote his time to the area for which he is best trained——designing facilities.

Why aren't educational specifications more widely used?

There are perhaps a number of reasons why educational specifications are not more widely used. Some reasons may be:

(a) The custom of letting the architect program the school facility.

(b) The vague demarcation of responsibility between the educator and the architect.

(c) The desire on the part of the architect to provide extra services.

(d) The misbelief that the school division does not have the capacity and/or the staff to do the task and cannot afford to purchase outside assistance.

(e) The default on the part of educators in assuming the leadership responsibility for developing educational specifications.

(f) The belief that some educators do not know how to direct the process of developing educational specifications.

What should be covered in educational specifications?

Educational specifications should provide specific answers to questions concerning what is to be included in the new facility. It should contain suggestions and recommendations in specific terms to aid in the planning and designing of an adequate functional plant adapted to modern educational methods.

The educational specifications should include at least the following areas:

(a) Educational situation and student body served

(b) Orientation and nature of the project

(c) Community to be served

(d) Educational philosophy of the district and staff

(e) Educational trends

(f) Site

(g) Functional relationships of the facility

(h) Nature of the teaching/learning process to be carried on in the facility

(i) Space requirements in square footage

(j) Specialized facilities for vocational education, science, physical education, home economics, industrial arts, music

(k) Indoor and outdoor recreational facilities

(l) Building communication and utility requirements

(m) Furniture and equipment

(n) Plant service areas and facilities

(o) Parking

After the educational specifications are written . . .

It must be remembered that even the best set of educational specifications will need further interpretation by the educator.

Educators must continually check the architectural drawings against the project's educational specifications. The specifications serve as a benchmark against which the drawings of the architect are evaluated.

A continuous and intense dialogue must be established between the educator and the architect to insure accurate interpretation of the educational specifications. This dialogue should continue through the entire design stage to the point where the working drawings are completed by the architect. After this point the form and purpose of the dialogue will change to reflect the construction phase of the project.

Some important things to keep in mind.

The educator is charged with the responsibility of planning and implementing an educational program designed to meet the needs of the students in a particular area. This program must be housed in a facility which will enhance the program and not restrict it. The educator, then, must also accept the responsibility of providing leadership in all phases of the process of planning a school—the process of developing educational specifications.

The degree of success of the facility in fitting the educational program does not rest solely with the architect. The major share rests with the educator. If the educator has exercised the amount of leadership as stipulated in this booklet in developing and utilizing educational specifications, the chances of a functional facility being designed and constructed will indeed be assured.